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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : FUJII
Serial No : 10/541,965
Confirm. No : 8926
Filed : July 11, 2005
For : BRITTLE MATERIAL...
Art Unit : 3742
Examiner : Maria Alexandra Elve
Dated : November 3, 2009

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW UNDER 37 CFR 41

Applicant requests review of the final rejection in the above identified application. No amendments are being filed with this request. This request is being filed with a notice of appeal. The review is requested for the reasons stated on the attached sheets. No more than five (5) pages are attached.

REMARKS

Claims 1, 9, 15 and 17-23 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Choo et al. (U.S. 6,407,360) in view of Okamoto (U.S. 5,502,001) and Xuan (U.S. 6,303,898). Applicant respectfully requests that this rejection be reversed as the final rejection fails to point to any specific passage in either Choo et al., Okamoto or Xuan that teaches or suggests a determination unit that includes a window comparator to determine a defective blind crack when a level of light reflected from the blind crack is greater than a first threshold level or lower than a second threshold level. As discussed below, none of the cited prior art references disclose such a combination of features.

Choo et al. fails to teach and fails to suggest the combination of a determination unit that includes a window comparator that determines whether a blind crack is a defective blind crack or a normal blind crack based on a level of light reflected from the blind crack as claimed. Choo et al. clearly discloses that the microprocessor 400 only detects whether the propagation path 120' is on the predetermined scribe line 120. However, the microprocessor 400 of Choo et al. does not detect a state of a blind crack as featured in the present invention. The final rejection fails to point to any teaching or suggestion in Choo et al. that would direct a person of ordinary skill in the art to a determination unit that includes a window comparator to determine whether a blind crack is in a defective state or a normal state as featured in the present invention. The final rejection merely makes reference to a long passage from Choo et al. that only directs a person of ordinary skill in the art to a microprocessor 400 that perceives a propagation path 120' of a crack generated from an input electric signal and compares the

propagation path 120' of the crack with the prestored path of the marked scribe line 120 to determine whether the propagation path 120' of the generated crack deviates from the marked scribe line 120 (see page 5, first paragraph of final rejection). The present invention takes a completely different approach. According to the present invention, the state of the blind crack is quickly determined during the scribing operation. This advantageously allows the scribing operation to be stopped immediately if the blind crack is found to be defective by the determination unit. This drastically increases manufacturing productivity since brittle substrate materials are not further processed once it is determined that the blind crack is improperly formed during the scribing operation. Instead of disclosing a determination unit that determines whether a blind crack is normal or defective, Choo et al. directs a person of ordinary skill in the art to a microprocessor 400 that determines whether a propagation path 120' deviates from a predetermined scribe line 120. This is a completely different approach from the present invention since Choo et al. fails to teach or suggest detecting a state of a blind crack with a determination unit that includes a window comparator as claimed. As such, the prior art as a whole does not establish a prima facie case of obviousness since the prior art as a whole does not teach or suggest important features of the claimed combination.

Okamoto fails to provide any teaching or suggestion for a determination unit that includes a window comparator as claimed. According to the present invention, the determination unit with the comparator determines whether a level of a light receiving signal from a light reception element is within predetermined light receiving thresholds to determine if a blind crack formed in a substrate is normal or defective. The final rejection does not cite

any portion of the disclosure of Okamoto that would direct a person of ordinary skill in the art to a determination unit as claimed. Okamoto merely discloses a light beam-forming apparatus 10 that comprises a beam expander 11, mirrors 12, 13, 14, half-mirrors 15, 16, lenses 17, 18 and an objective lens 5 that are arranged on an optical path that links a source 1 of light of the optical system to a sample 2. However, the arrangement of mirrors and lens of Okamoto does not include a determination unit that comprises a window comparator as featured in the present invention. In fact, there is no teaching or suggestion in Okamoto that would direct a person of ordinary skill in the art to determine a condition of a blind crack formation with a determination unit as featured in the present invention. As such, the prior art as a whole does not establish a prima facie case of obviousness as the prior art as a whole does not teach or suggest essential features of the claimed combination.

Xuan fails to teach or suggest the combination of a determination unit that includes a window comparator wherein the determination unit determines a state of a blind crack as claimed. Xuan merely discloses a substrate of a magnetic recording medium is laser textured by employing a fiber-optic laser delivery system. However, the system of Xuan does not include a determination unit that determines whether a blind crack in a substrate is in a defective state or a normal state as featured in the present invention. Xuan is only concerned with laser texturing a magnetic recording medium, but fails to be concerned with determining the condition of a blind crack in a brittle material substrate with a determination unit prior to breaking the brittle material substrate as claimed. The final rejection fails to provide any citation in the disclosure of Xuan that would direct a person of ordinary skill in the art to a

determination unit as recited in the claimed combination. As such, the prior art as a whole does not establish a prima facie case of obviousness as the prior art as a whole does not teach or suggest critical features of the present invention.

Applicant respectfully requests that the rejection of the claims be reversed as the final rejection fails to point to any specific passages in the prior art references that provides a teaching or suggestion for the combination of a determination unit that includes a window comparator as claimed.

Respectfully submitted
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SHOULD ANY OTHER FEE BE REQUIRED, THE PATENT AND TRADEMARK OFFICE
IS HEREBY REQUESTED TO CHARGE SUCH FEE TO OUR DEPOSIT ACCOUNT 13-
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